

REMARKS

Claims 19-37 are currently pending in this application with claim 19 being in independent form. Claim 19 has been amended to change the preamble from “A line sensor having a gripping means” to “Gripping means” to overcome the rejection under 35 U.S.C. 112, second paragraph. Support for this amendment is provided in the claims as originally filed.

No new matter has been added.

Response to Rejections

Claims 19-24 and 27-36 are rejected under 35 U.S.C. §102(b) as being anticipated by newly cited U.S. Patent No. 4,976,157 to Berthold et al. (hereinafter referred to as “Berthold”). It is assumed that claim 37 was inadvertently omitted from this rejection. Specifically, the Office Action refers to Figure 2 of Berthold stating that Berthold shows a gripping means for a line sensor for gripping a signal line 15 comprising at least one rigid component 26 adapted to grip a sleeve 14 of a signal line (i.e., optical cable 15). It appears that the Office Action is equating the “sleeve 14”, which is made of a flexible material, with the spring element which engages and exerts a biasing force on the rigid component and away from the signal line to remove a load on the rigid component.

Applicant respectfully traverses this rejection for the following reasons.

Berthold is directed to a fiber optic flow sensor situated transversely in a conduit wherein two fiber optic cables 15, 16 are enclosed with a holding mechanism (resilient member 14) wherein the fiber optic cables 15, 16 are axially aligned but separated by a gap 18. When under load, the resilient member 14 deflects, causing the line sensor to move to measure the flow rate 24 moving through conduit 12 (see col. 2, lines 52+). In contrast thereto, in the present invention the resilient member (or spring element) exerts a biasing force to the rigid member *away* from the signal line to *remove* the load of the rigid member from the signal line. Additionally, the “rigid component 26” taught by Berthold is actually an obstruction to increase the cross-sectional area of tube 14 to increase the sensitivity and/or amount of deflection of the tube to measure the flow forces on the sensor holding mechanism (see col. 3, lines 42+), **not** a rigid component adapted to grip on a sleeve of the signal line, as specifically set forth in the claims.

Accordingly, Berthold fails to teach the specifically claimed feature of (1) a rigid component adapted to grip on a sleeve of the signal line and (2) a spring element engaging on the rigid component to exert a biasing force to the rigid component and away from the signal line to remove a load of the rigid component from the signal line.

Accordingly, in view of the reasons set forth above, it is respectfully requested that the rejection of claims 19-24 and 27-37 under 35 U.S.C. §102(b) be withdrawn as Berthold fails to teach each and every feature set forth in the claims.

Although the claims are currently not rejected under 35 U.S.C. §103(a) for obviousness over Berthold, Berthold fails to teach or suggest the presently claimed invention. As discussed in the Declaration under 37 C.F.R. §1.132 of R. Tielbeke, the managing Director of the assignee of the present invention, Lightspeed Inventions, the device of Berthold is completely different and functions in a completely different manner than the present invention. Berthold is concerned with a fiber optic flow sensor situated in a conduit 12 which encloses two fiber optic cables 15, 16 held by a holding mechanism or tube 14. The fiber optic cables are axially aligned but separated by a gap 18. Fluid flow in the conduit, as depicted by 24 produces a deflection of tube 14 and the attenuation of light transmitted from one fiber to the other. This deflection is proportional to the flow rate allowing for the measurement of this flow rate. In the present invention, the resilient member exerts a biasing force to the rigid member away from the signal line. Further, component "26" of Berthold is not a rigid component, but is an obstruction used to increase the cross-sectional area of tube 14.

Further still, the present invention enjoys significant commercial success as evidenced by the Declaration under 37 C.F.R. §1.132 of R. Tielbeke. As noted in the Declaration, the invention enjoys significant commercial success internationally, in technical areas demanding precise and reliable sensors. The inventors have developed a plethora of applications for the invention in cooperation with a number of partners in various technological areas. Further still, the invention has been licensed by several industrial partners, which is an indication that the invention is perceived as a true improvement in the filed of line sensor gripping means. A list of companies and applications the invention is applied is listed in the attached Table 1.

Claims 25-26 are rejected under 35 U.S.C. §103(a) as being obvious over Berthold in view of U.S. Patent No. 5,703,754 to Hinze.

Hinze is relied upon as teaching materials having a hardness of between 10-11 shores. Hinze fails to overcome the deficiencies of Berthold. Hinze shows adhesive sealant as materials used for construction of a circuit board wherein a shore hardness of 40-50, after curing of the sealant, is preferred (col. 3, lines 34-35). The function of the hardness is apparently to make the board tamper deterrent and tamper evident (col. 3, line 42). This implies that the cured sealant has a lack of resilience, as resilient materials could come back to their original form after a tampering attempt.

Moreover, as stated above, the combination of Berthold with Hinze would not lead to the invention as recited in base claim 19, as the claimed features of a rigid component adapted to grip on a sleeve of the signal line and a spring element engaging on the rigid component to exert a biasing force to the rigid component and away from the signal line to remove a load of the rigid component from the signal line is still lacking in Berthold.

For the reasons set forth above, it is respectfully requested that the rejection of claims 25-26 under 35 U.S.C. §103(a) be withdrawn as the combination of Berthold with Hinze fails to render these claims obvious.

CONCLUSION

Based on the foregoing amendments and remarks, reconsideration of the rejection and allowance of pending claims 19-37 is respectfully requested.

Respectfully submitted,

THE WEBB LAW FIRM

By 
John W. McIlvaine
Registration No. 34,219
Attorney for Applicant
436 Seventh Avenue
700 Koppers Building
Pittsburgh, PA 15219
Telephone: (412) 471-8815
Facsimile: (412) 471-4094
E-mail: webblaw@webblaw.com